

A NEW *ASTACOPSIS* FROM NORTH QUEENSLAND.

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(Plate XXXIV.)

Species of *Astacopsis* have been recorded as characteristic Southern Australian crayfishes. Therefore it was surprising to receive a spiny crayfish from the Cairns district, North Queensland, in July last. This was kindly forwarded by Dr. H. Flecker, President of the North Queensland Naturalists' Club. The specimen was collected at Root's Creek, near Mt. Carbine, in the Mt. Molloy district, about 80 miles west of Cairns.

ASTACOPSIS FLECKERI sp. nov.

Described from a single specimen. Male. Type locality: Root's Creek, North Queensland.

In its outstanding characteristics, this crayfish appears to be more closely allied to *A. franklinii* of Tasmania than to its nearest geographical congener, *A. serratus*. The species differ, however, in a complex of minor characters of armature and sculpturing that can best be seen by comparing the figures of the two. The most noticeable difference is the absence in *A. fleckeri* of the median suture which appears so prominent a feature of the carpus of the cheliped of *A. franklinii*. This is represented on the carpus of *A. fleckeri* only by a very slight shallowing. In *A. fleckeri*, also, the lateral keels of the rostrum are not so prominent, and each is provided with only three spines, which appear shorter and blunter than those in the figure of *A. franklinii*.

The other more important differences are the development of the exopodite of the 3rd maxilliped, which is much longer in *A. fleckeri*, and the shape of the antennal scale. This appears relatively broader than that figured by Geoffrey Smith for *A. franklinii*, and the inner border is almost semi-circular when viewed from above.

Measurements.—

Maximum length from tip of rostrum to posterior border of telson, 223 mm.

Right chela—Maximum length, 93 mm. ; maximum breadth, 38 mm.

Left chela—Maximum length, 100 mm. ; maximum breadth, 42 mm.

The left branchiostegite was removed and the gills examined. These show no marked difference from the typical characters of the genus.

The rostrum is broad, rounded and concave; there are seven subequal, blunt spines around the raised border; the anterior one is not enlarged, and is not produced posteriorly as a keel on the concave median surface.

Except for minute pitting, the median portion of the carapace is smooth. Antero-laterally there are tubercles and small, blunt spines. The branchiostegites also bear tubercles, sparsely scattered except on the posterior portion,

where they are slightly more numerous. Behind the ocular margin there is a small, depressed keel, without an anterior spiny point, and behind this a small tubercle. This sculpturing is relatively less prominent than that figured for *A. franklinii*, and that in our specimens of *A. serratus*.

The inter-antennal spine is long and narrow, with three serrations on either side.

The metopie plate is relatively smooth and glabrous, unlike that of *A. serratus*, with a few hairs sparsely clothing the posterior portion. There is a group of about twelve tubercles on each lateral border. The oral border consists of a transverse, rounded bar, very slightly curved; the lateral margins are sub-spherical.

The lateral border of the 1st abdominal segment bears a sharp spine.

The left lateral border of the 2nd abdominal segment bears four large sharp spines, and the right bears five.

The 3rd to the 5th abdominal segments bear laterally a sharp spine, decreasing in size on each segment posteriorly. The 6th segment bears no spines, although on the right side there is a small tubercle some distance from the lateral border.

The exopodite of the uropod has a row of teeth between the hard and membranous portions. The endopodite has two spines between the two portions—one on the external border and one in the middle line. The telson has two lateral spines.

The exopodite of the 3rd maxilliped reaches or slightly exceeds the 3rd segment of the endopodite.

The propodus of the chelipeds is serrated internally and externally. The biting edges of the propodus and the dactylus bear rows of tubercles, some of which are greatly enlarged. The upper surface of the carpus is smooth and tumid, with only a faint trace of a median suture. On the under surface, there is a transverse row of three large spines, extending from near the anterior margin to the middle of another row of spines (three on the right cheliped, four on the left) on the inner margin. There are two smaller spines on the outer margin. The merus is armed on the upper margin with a row of spines; on the under margin there are two rows—an interior row of seven or eight spines, and an exterior row of three larger spines. The ischium is provided with a few small spines on the under margin.

The 1st walking leg has one spine on the anterior border at the distal end. This is absent on the left leg. Each of the 2nd pair of walking legs bears a single spine on the posterior border at the proximal end. On the two posterior pairs the spines are much more numerous.

Colour in spirits.—General colour of head, dorsal portion of thorax and abdomen, and of the chelipeds, dull bluish-green; the antennæ and antennules congo pink; the membranous portion of the tail-fan, darker congo pink; spines on



ASTACOPSIS FLECKERI.

the chelipeds and the tips of the great chelæ carmine ; tubercles on the biting edges dull carmine at the base, cream-buff above ; legs greenish glaucous blue, deep greenish glaucous at their extremities ; chelæ on 1st two legs dark olive-buff.

(Colour names taken from Ridgway's "Colour Standards and Nomenclature," 1912.)

It may be noted that specimens of the well-known *A. serratus* have been received from such localities in Southern Queensland as Tamborine Mountain and the Lamington National Park. McCulloch¹ has also recorded specimens from near Stanthorpe, and made notes on the variations in colour that these crayfish exhibit. It is evident that *A. serratus* has a far wider range than that recognised by Geoffrey Smith², who regarded the Blue Mountains as its northern limit.

In view of this discovery, it is interesting also to note that *Astacopsis* was recorded by Nobili³ from Sorong, New Guinea, from a specimen collected by D'Albertis. Later authorities,² and ⁴ however, regarded this as a probable mistaken locality.

Special efforts are being made by members of the North Queensland Naturalists' Club to obtain additional material.

¹ A. R. McCulloch, Recs. Aust. Mus. XI., p. 237-238.

² Geoffrey Smith, P.Z.S., 1912, pp. 144-169.

³ G. Nobili, Annali del Mus. Civ. Stor. Nat. Gen., 1899, 40, p. 246.

⁴ Walter Faxon, Mem. Mus. Comp. Zool., XL., No. 8, p. 352.